

**(57) Abstract**

The invention relates to monitoring the neurological state of a patient. In the method invention, both cortex- and subcortex-related biosignal data are obtained from the patient, the subcortex-related biosignal data including at least bioimpedance signal data. A first indicator is calculated based on the cortex-related biosignal data, the first indicator being indicative of cortical activity in the patient and a set of indicators is calculated based on the subcortex-related biosignal data indicative of subcortical activity in the patient, the set of indicators including at least a second indicator calculated based on the bioimpedance signal data. A composite indication is then produced based on the first indicator and on the set of indicators. The invention also concerns an apparatus and a sensor for monitoring the neurological state of the patient.